

1.2 IN THE CLAIMS:

Please cancel claims 137-143, 149-151, 158-161, 163-164, 167-168, 177-180, 217-218, and 223-226 without prejudice and without disclaimer.

Please amend claims 144-146, 157, 162, 169-172, 174-176, 203-207 and 220-222 to read as follows:

1.-109. (Canceled)

110. (Previously Presented) An isolated nucleic acid molecule comprising a nucleic acid sequence that encodes a polypeptide having the amino acid sequence of SEQ ID NO:2.

111. (Previously Presented) An isolated nucleic acid consisting of a nucleic acid that encodes the amino acid sequence of SEQ ID NO:4, a nucleic acid that encodes the amino acid sequence of SEQ ID NO:45, a nucleic acid that encodes the amino acid sequence of SEQ ID NO:47 or a nucleic acid that encodes the amino acid sequence of SEQ ID NO:50.

112. (Previously Presented) The isolated nucleic acid molecule of claim 110, comprising a nucleic acid sequence that has the nucleotide sequence from position 115 to position 1327 of SEQ ID NO:1.

113. (Previously Presented) An isolated fragment of the isolated nucleic acid of claim 111, wherein said fragment encodes at least 16 contiguous amino acids of SEQ ID NO:4, at least 20

contiguous amino acids of SEQ ID NO:45, at least 20 contiguous amino acids of SEQ ID NO:47 or at least 125 contiguous amino acids of SEQ ID NO:50.

114-115. (Canceled)

116. (Previously Presented) The isolated fragment of claim 113, wherein said fragment encodes at least 25 contiguous amino acids of SEQ ID NO:4, SEQ ID NO:45 or SEQ ID NO:47.

117. (Previously Presented) The isolated fragment of claim 116, wherein said fragment encodes at least about 30 contiguous amino acids of SEQ ID NO:4, SEQ ID NO:45 or SEQ ID NO:47.

118. (Previously Presented) The isolated fragment of claim 117, wherein said fragment encodes at least about 40 contiguous amino acids of SEQ ID NO:4, SEQ ID NO:45 or SEQ ID NO:47.

119. (Previously Presented) The isolated fragment of claim 118, wherein said fragment encodes at least about 50 contiguous amino acids of SEQ ID NO:4, SEQ ID NO:45 or SEQ ID NO:47.

120. (Previously Presented) The isolated fragment of claim 119, wherein said fragment encodes at least about 60 contiguous amino acids of SEQ ID NO:4, SEQ ID NO:45 or SEQ ID NO:47.

121. (Previously Presented) The isolated fragment of claim 120, wherein said fragment encodes at least about 70 contiguous amino acids of SEQ ID NO:4, SEQ ID NO:45 or SEQ ID NO:47.

122. (Previously Presented) The isolated fragment of claim 121, wherein said fragment encodes at least about 80 contiguous amino acids of SEQ ID NO:4, SEQ ID NO:45 or SEQ ID NO:47.

123. (Previously Presented) The isolated fragment of claim 122, wherein said fragment encodes at least about 90 contiguous amino acids of SEQ ID NO:4, SEQ ID NO:45 or SEQ ID NO:47.

124. (Previously Presented) The isolated fragment of claim 123, wherein said fragment encodes at least about 100 contiguous amino acids of SEQ ID NO:4, SEQ ID NO:45, or SEQ ID NO:47.

125. (Previously Presented) The isolated fragment of claim 113, wherein said fragment encodes at least 125 contiguous amino acids of SEQ ID NO:4, SEQ ID NO:45, SEQ ID NO:47 or SEQ ID NO:50.

126. (Previously Presented) The isolated fragment of claim 113, wherein said fragment encodes at least about 150 contiguous amino acids of SEQ ID NO:4, SEQ ID NO:45, SEQ ID NO:47 or SEQ ID NO:50.

127. (Previously Presented) The isolated fragment of claim 113, wherein said fragment encodes at least about 200 contiguous amino acids of SEQ ID NO:4, SEQ ID NO:45, SEQ ID NO:47 or SEQ ID NO:50.

128. (Previously Presented) An isolated nucleic acid molecule comprising a nucleic acid sequence that encodes a polypeptide having the amino acid sequence of SEQ ID NO:4, SEQ ID NO:45, SEQ ID NO:47 or SEQ ID NO:50.

129. (Previously Presented) The isolated nucleic acid molecule of claim 128, comprising a nucleic acid sequence that encodes a polypeptide having the amino acid sequence of SEQ ID NO:4.

130. (Previously Presented) The isolated nucleic acid molecule of claim 128, comprising a nucleic acid sequence that encodes a polypeptide having the amino acid sequence of SEQ ID NO:45.

131. (Previously Presented) The isolated nucleic acid molecule of claim 128, comprising a nucleic acid sequence that encodes a polypeptide having the amino acid sequence of SEQ ID NO:47.

132. (Previously Presented) The isolated nucleic acid molecule of claim 128, comprising a nucleic acid sequence that encodes a polypeptide having the amino acid sequence of SEQ ID NO:50.

133. (Previously Presented) The isolated nucleic acid fragment of claim 113 operatively linked to a promoter.

134. (Previously Presented) A vector comprising the fragment of claim 113.

135. (Previously Presented) The vector of claim 134, comprised within a recombinant host cell.

136. (Previously Presented) An isolated nucleic acid molecule encoding a fusion protein, wherein said isolated nucleic acid molecule comprises the fragment of claim 113 and a second nucleic acid coding region and wherein said isolated nucleic acid molecule encodes said fusion protein.

137.-143. (Canceled)

144. (Currently Amended) ~~The isolated nucleic acid molecule of claim 137, wherein the nucleic acid molecule has~~ An isolated nucleic acid molecule comprising a nucleic acid sequence that encodes a P-TEFb large subunit protein, wherein said P-TEFb large subunit protein binds to a P-TEFb

kinase subunit protein having the sequence of SEQ ID NO:2 or SEQ ID NO:6 to form a P-TEFb enzyme complex that promotes transcription elongation and wherein said nucleic acid molecule comprises the nucleotide sequence of SEQ ID NO:44.

145. (Currently Amended) The isolated nucleic acid molecule of claim 137, wherein the nucleic acid molecule has An isolated nucleic acid molecule comprising a nucleic acid sequence that encodes a P-TEFb large subunit protein, wherein said P-TEFb large subunit protein binds to a P-TEFb kinase subunit protein having the sequence of SEQ ID NO:2 or SEQ ID NO:6 to form a P-TEFb enzyme complex that promotes transcription elongation and wherein said nucleic acid molecule comprises the nucleotide sequence of SEQ ID NO:46.

146. (Currently Amended) The isolated nucleic acid molecule of claim 137, wherein the nucleic acid molecule has An isolated nucleic acid molecule comprising a nucleic acid sequence that encodes a P-TEFb large subunit protein, wherein said P-TEFb large subunit protein binds to a P-TEFb kinase subunit protein having the sequence of SEQ ID NO:2 or SEQ ID NO:6 to form a P-TEFb enzyme complex that promotes transcription elongation and wherein said nucleic acid molecule comprises the nucleotide sequence of SEQ ID NO:49.

147. (Previously Presented) The isolated nucleic acid molecule of claim 219, wherein the nucleic acid molecule is up to about 10,000 basepairs in length.

148. (Previously Presented) The isolated nucleic acid molecule of claim 147, wherein the nucleic acid molecule is up to about 5,000 basepairs in length.

149.-151. (Canceled)

152. (Previously Presented) An isolated nucleic acid molecule comprising:

- (a) a first nucleic acid sequence that encodes a P-TEFb small subunit protein that has kinase activity and binds to a P-TEFb large subunit protein of SEQ ID NO:4, SEQ ID NO:45, SEQ ID NO:47 or SEQ ID NO:50 to form a P-TEFb enzyme complex that promotes transcription elongation, wherein said P-TEFb small subunit protein has the amino acid sequence of SEQ ID NO:2 or SEQ ID NO:6; and
- (b) a second nucleic acid sequence that encodes a P-TEFb large subunit protein that binds to a P-TEFb kinase subunit protein of SEQ ID NO:2 or SEQ ID NO:6 to form a P-TEFb enzyme complex that promotes transcription elongation, wherein said P-TEFb large subunit protein has the amino acid sequence set forth in SEQ ID NO:4, SEQ ID NO:45, SEQ ID NO:47 or SEQ ID NO:50.

153. (Previously Presented) The isolated nucleic acid molecule of claim 152, wherein said first nucleic acid sequence encodes a polypeptide having the amino acid sequence of SEQ ID NO:6.

154. (Previously Presented) The isolated nucleic acid molecule of claim 152, wherein said second nucleic acid sequence encodes a polypeptide that has the amino acid sequence of SEQ ID NO:45, SEQ ID NO:47 or SEQ ID NO:50.

155. (Previously Presented) The isolated nucleic acid molecule of claim 154, wherein said second nucleic acid sequence has the nucleotide sequence of SEQ ID NO:44, SEQ ID NO:46 or SEQ ID NO:49.

156. (Previously Presented) The isolated nucleic acid molecule of claim 152, wherein said first nucleic acid sequence has the nucleotide sequence of SEQ ID NO:5 and wherein said second nucleic acid sequence has the nucleotide sequence of SEQ ID NO:44, SEQ ID NO:46 or SEQ ID NO:49.

157. (Currently Amended) One or more expression units comprising:

- (a) a first expression unit comprising, under the transcriptional control of a promoter, a first nucleic acid sequence that encodes a P-TEFb small subunit protein that has kinase activity and binds to a P-TEFb large subunit protein of SEQ ID NO:4, SEQ ID NO:45, SEQ ID NO:47 or SEQ ID NO:50 to form a P-TEFb enzyme complex that promotes transcription elongation, wherein said P-TEFb small subunit protein has comprises the amino acid sequence of SEQ ID NO:2 or SEQ ID NO:6; and
- (b) a second expression unit comprising, under the transcriptional control of a promoter, a second nucleic acid sequence that encodes a P-TEFb large subunit protein that comprises an amino acid sequence that is at least 95% identical to the sequence of SEQ ID NO:4, SEQ ID NO:45, SEQ ID NO:47 or SEQ ID NO:50 as defined in claim 137 or claim 149.

158.-161. (Canceled)

162. (Currently Amended) The one or more isolated expression units of claim 157161, wherein said first expression unit comprises a first nucleic acid sequence that encodes a polypeptide that has the amino acid sequence of SEQ ID NO:6.

163.-168. (Canceled)

169. (Currently Amended) The one or more expression units of claim 157168, wherein said second expression unit comprises a second nucleic acid sequence that encodes a P-TEFb large subunit protein ~~as defined in claim 137~~ and that has the amino acid sequence of SEQ ID NO:4.

170. (Currently Amended) The one or more expression units of claim 157168, wherein said second expression unit comprises a second nucleic acid sequence that encodes a P-TEFb large subunit protein ~~as defined in claim 137~~ and that has the amino acid sequence of SEQ ID NO:45.

171. (Currently Amended) The one or more expression units of claim 157168, wherein said second expression unit comprises a second nucleic acid sequence that encodes a P-TEFb large subunit protein ~~as defined in claim 137~~ and that has the amino acid sequence of SEQ ID NO:47.

172. (Currently Amended) The one or more expression units of claim 157164, wherein said second expression unit comprises a second nucleic acid sequence that encodes a P-TEFb large subunit protein ~~as defined in claim 137~~ and that has the amino acid sequence of SEQ ID NO:50.

173. (Canceled)

174. (Currently Amended) The one or more expression units of claim 157168, wherein said second expression unit comprises a second nucleic acid sequence that has the nucleotide sequence of SEQ ID NO:44.

175. (Currently Amended) The one or more expression units of claim 157168, wherein said second expression unit comprises a second nucleic acid sequence that has the nucleotide sequence of SEQ ID NO:46.

176. (Currently Amended) The one or more expression units of claim 157168, wherein said second expression unit comprises a second nucleic acid sequence that has the nucleotide sequence of SEQ ID NO:49.

177.-180. (Canceled)

181. (Previously Presented) One or more expression units comprising:

(a) a first isolated expression unit comprising, under the transcriptional control of a promoter, a first nucleic acid sequence that encodes a P-TEFb small subunit

protein that has kinase activity and binds to a P-TEFb large subunit protein of SEQ ID NO:4, SEQ ID NO:45, SEQ ID NO:47 or SEQ ID NO:50 to form a P-TEFb enzyme complex that promotes transcription elongation, wherein said P-TEFb small subunit protein has the amino acid sequence of SEQ ID NO:2 or SEQ ID NO:6; and

- (b) a second isolated expression unit comprising, under the transcriptional control of a promoter, a second nucleic acid sequence that encodes a P-TEFb large subunit protein that binds to a P-TEFb kinase subunit protein of SEQ ID NO:2 or SEQ ID NO:6 to form a P-TEFb enzyme complex that promotes transcription elongation, wherein said P-TEFb large subunit protein has the amino acid sequence of SEQ ID NO:4, SEQ ID NO:45, SEQ ID NO:47 or SEQ ID NO:50.

182.-183. (Canceled)

184. (Previously Presented) The one or more expression units of claim 181, wherein said first expression unit comprises a first nucleic acid sequence that encodes a P-TEFb small subunit protein that has kinase activity and binds to a P-TEFb large subunit protein of SEQ ID NO:4, SEQ ID NO:45, SEQ ID NO:47 or SEQ ID NO:50 to form a P-TEFb enzyme complex that promotes transcription elongation, wherein said first nucleic acid sequence has the nucleotide sequence of SEQ ID NO:5.

185. (Canceled)

186. (Previously Presented) The one or more expression units of claim 181, wherein said second expression unit comprises a second nucleic acid sequence that encodes a P-TEFb large subunit protein that binds to a P-TEFb kinase subunit protein of SEQ ID NO:2 or SEQ ID NO:6 to form a P-TEFb enzyme complex that promotes transcription elongation, wherein said P-TEFb large subunit protein has the amino acid sequence of SEQ ID NO:4.

187. (Previously Presented) The one or more expression units of claim 181, wherein said second expression unit comprises a second nucleic acid sequence that encodes a P-TEFb large subunit protein that binds to a P-TEFb kinase subunit protein of SEQ ID NO:2 or SEQ ID NO:6 to form a P-TEFb enzyme complex that promotes transcription elongation, wherein said P-TEFb large subunit protein has the amino acid sequence of SEQ ID NO:45.

188. (Previously Presented) The one or more expression units of claim 181, wherein said second expression unit comprises a second nucleic acid sequence that encodes a P-TEFb large subunit protein that binds to a P-TEFb kinase subunit protein of SEQ ID NO:2 or SEQ ID NO:6 to form a P-TEFb enzyme complex that promotes transcription elongation, wherein said P-TEFb large subunit protein has the amino acid sequence of SEQ ID NO:47.

189. (Previously Presented) The one or more expression units of claim 181, wherein said second expression unit comprises a second nucleic acid sequence that encodes a P-TEFb large subunit protein that binds to a P-TEFb kinase subunit protein of SEQ ID NO:2 or SEQ ID NO:6 to form a P-TEFb enzyme complex that promotes transcription elongation, wherein said P-TEFb large subunit protein has the amino acid sequence of SEQ ID NO:50.

190. (Canceled)

191. (Previously Presented) The one or more expression units of claim 181, wherein said second expression unit comprises a second nucleic acid sequence that has the nucleotide sequence of SEQ ID NO:44.

192. (Previously Presented) The one or more expression units of claim 181, wherein said second expression unit comprises a second nucleic acid sequence that has the nucleotide sequence of SEQ ID NO:46.

193. (Previously Presented) The one or more expression units of claim 181, wherein said second expression unit comprises a second nucleic acid sequence that has the nucleotide sequence of SEQ ID NO:49.

194. (Canceled)

195. (Previously Presented) The one or more expression units of claim 181, wherein said first and said second expression units are comprised in a single expression vector.

196. (Previously Presented) The one or more expression units of claim 181, wherein said first and said second expression units are each comprised in a separate expression vector.

197. (Previously Presented) The one or more expression units of claim 181, wherein said one or more expression units are comprised within a recombinant host cell.

198. (Previously Presented) A recombinant host cell comprising an isolated nucleic acid molecule in accordance with claim 110, claim 111 or claim 152, or comprising an isolated fragment of an isolated nucleic acid in accordance with claim 113.

199. (Previously Presented) The recombinant host cell of claim 198, wherein said cell is a prokaryotic host cell.

200. (Previously Presented) The recombinant host cell of claim 198, wherein said cell is a eukaryotic host cell.

201. (Previously Presented) The recombinant host cell of claim 200, wherein said cell is a mammalian host cell.

202. (Previously Presented) The recombinant host cell of claim 198, wherein said cell further comprises an HIV Tat protein.

203. (Currently Amended) A recombinant host cell that comprises ~~an isolated nucleic acid in accordance with claim 137 or claim 149 or that comprises~~ one or more expression units in accordance with claim 157.

204. (Currently Amended) ~~The A~~ recombinant host cell of claim 198, wherein said cell that comprises an isolated fragment of an isolated nucleic acid molecule in accordance with claim 113.

205. (Currently Amended) ~~The A~~ recombinant host cell of claim 198, wherein said cell that comprises an isolated nucleic acid molecule in accordance with claim 110.

206. (Currently Amended) ~~The A~~ recombinant host cell of claim 198, wherein said cell that comprises an isolated nucleic acid molecule in accordance with claim 111.

207. (Currently Amended) ~~The A~~ recombinant host cell of claim 198, wherein said cell that comprises an isolated nucleic acid molecule in accordance with claim 152.

208. (Previously Presented) A recombinant host cell that comprises one or more expression units in accordance with claim 181.

209.-210. (Canceled)

211. (Previously Presented) The recombinant host cell of claim 208, wherein said cell is a prokaryotic host cell.

212. (Previously Presented) The recombinant host cell of claim 208, wherein said cell is a eukaryotic host cell.

213. (Previously Presented) The recombinant host cell of claim 212, wherein said cell is a mammalian host cell.

214. (Previously Presented) The recombinant host cell of claim 208, wherein said cell further comprises an HIV Tat protein.

215. (Previously Presented) The recombinant host cell of claim 208, wherein said one or more expression units are comprised in a single expression vector.

216. (Previously Presented) The recombinant host cell of claim 208, wherein said one or more expression units are each comprised in a separate expression vector.

217.-218. (Canceled)

219. (Previously Presented) An isolated nucleic acid molecule comprising the nucleotide sequence of SEQ ID NO:44, SEQ ID NO:46 or SEQ ID NO:49.

220. (Currently Amended) ~~The isolated nucleic acid molecule of claim 219, wherein said nucleic acid molecule comprises~~ An isolated nucleic acid molecule comprising the nucleotide sequence of SEQ ID NO:44.

221. (Currently Amended) ~~The isolated nucleic acid molecule of claim 219, wherein said nucleic acid molecule comprises~~ An isolated nucleic acid molecule comprising the nucleotide sequence of SEQ ID NO:46.

222. (Currently Amended) ~~The isolated nucleic acid molecule of claim 219, wherein said nucleic acid molecule comprises~~ An isolated nucleic acid molecule comprising the nucleotide sequence of SEQ ID NO:49.

223.-226. (Canceled)